

paragraph 2 as indefinite. The Examiner also rejected claims 15–21 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 5,552,039 ("*McBrayer*"), rejected claim 26 under 35 U.S.C. § 103(a) as unpatentable over *McBrayer* in view of Japanese publication number 09-085075 ("*Suzuki*"), and rejected claim 27 under 35 U.S.C. § 103(a) as unpatentable over *McBrayer* in view of U.S. Patent 4,177,545 ("*Matovich*").<sup>1</sup>

### **Information Disclosure Statement**

On December 13, 2002, Applicants submitted an Information Disclosure Statement, which provided two references at the Examiner's request. Applicants have not received an initialed Form 1449 indicating those references have been considered. Applicants request that in the next communication from the Office, the Examiner include an initialed Form 1449 indicating those references have been considered.

### **Amendment**

Applicants have amended claim 15 to more clearly claim Applicants' invention and to incorporate the subject matter of claim 27. Applicants have amended claims 19 and 20 to recite "materials" as the Examiner requested. Applicants have canceled claim 27 without prejudice or disclaimer of the subject matter contained therein. Alterations to the claims are noted in the attached Appendix with insertions indicated by underlining and deletions indicated by square brackets.

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<sup>1</sup> In the Office Action, the Examiner purported to reject claims 26 and 27 under 35 U.S.C. § 102(b); however, that appears to be a typographical error. The general heading, and only quoted statutory provision, is 35 U.S.C. § 103(a). In addition, the Examiner rejected claims 26 and 27 over multiple references in combination, which can never serve as a proper rejection under § 102 but may form a basis under § 103. (MPEP § § 2131 & 2141 (8<sup>th</sup> ed. 2001); see also MPEP § 2131.01 (describing situations permitting multiple reference rejection under § 102, each of which is inapplicable to the pending Office Action).) Applicants will therefore address the Examiner's rejection of claim 26 under § 103(a) and request correction if the Examiner, in fact, intended to reject that claim under § 102(b). Applicants will not respond to the reject of claim 27, which is moot in view of Applicants' cancellation of that claim.

**Objection to claims**

The Examiner objected to claims 19 and 20 because “material” should be inserted after “at least one,” as recited in line 2 of each claim. Applicants have amended claims 19 and 20 as suggested by the Examiner. The amendment of these claims is made without reference to any prior art reference and should not be considered a disclaimer of any subject matter encompassed by the claim either literally or through equivalents. Withdrawal of the objection is respectfully requested.

**Rejection of claims under § 112, ¶ 2**

The Examiner rejected claims 15–21 and 26 under 35 U.S.C. § 112, paragraph 2 as indefinite.

**Rejection of claim 15**

Regarding claim 15, the Examiner finds “installed through a gap” unclear as to the structural limitation. The Examiner also finds unclear the structural relationship of “a treatment object” and “a reaction medium” to the other elements of the apparatus. Applicants traverse the rejection of this claim. Applicants have amended claim 15 to more clearly recite Applicants’ invention.

Applicants have incorporated the subject matter of claim 27 into claim 15. Thus, Applicants respond to the rejection of claim 27 to the extent it is applicable to claim 15. The Examiner rejected claim 27, finding the claim unclear “as to the structural limitation the applicants are attempting to recite by, ‘... connected to the pressure reactor through a second connector.’ (line 4) since it is unclear as to which previously recited structural element the connection refers.” (Paper No. 13, at 3.) Applicants

believe the recitation of this subject matter in claim 15 makes clear that the second reservoir is connected to the pressure reactor through a second connecting pipe.

Applicants submit that claim 15 is definite as written.

**Rejection of claim 16–21**

Applicants believe that claims 16–21 are rejected under § 112, paragraph 2 because of their dependence from claim 15. Therefore, Applicants submit that claims 16–21 are likewise definite as written at least because of their dependence from claim 15. Withdrawal of this rejection of claims 15–21 is respectfully requested.

**Rejection of claim 26**

The Examiner rejected claim 26 alleging “the language of the claim is directed to a method limitation which renders the claim vague and indefinite as it is unclear as to what structural elements the applicants are attempting to recite, since ‘the pressure holding fluid’ is not an element of the apparatus.” (Paper No. 13, at 3.)

Applicants respectfully traverse this rejection. Claim 16 recites, *inter alia*, “wherein the means for controlling pressure within the gap comprises a fluid feeder for feeding a *pressure holding fluid* into the gap and a pressure controller for controlling pressure of the pressure holding fluid.” (Emphasis added.) Claim 26 recites, “[t]he pressure treatment apparatus as set forth in claim 16, wherein the pressure holding fluid is water.” That is, claim 26 depends from and further limits “a pressure holding fluid,” recited in claim 16. Applicants submit, therefore, that claim 26 is neither vague nor indefinite as alleged by the Examiner. Withdrawal of this rejection is respectfully requested.

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**Rejection of claims 15–21 under § 103(a)**

The Examiner rejected claims 15–21 under § 103(a) as unpatentable over *McBrayer*. Because the Examiner has not made a *prima facie* case for obviousness, Applicants respectfully traverse this rejection of these claims.

To establish a *prima facie* case of obviousness under §103(a), each of three requirements must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine references or modify a reference in a manner resulting in the claimed invention. (See MPEP § 2143.) Second, a reasonable expectation of success must exist that the proposed modification will work for the intended purpose. (See *id.*) Moreover, both of these requirements must “be found in the prior art, not in applicant’s disclosure.” (*Id.*) Third, the reference or references, taken alone or in combination, must disclose or suggest every element recited in the claims. (See MPEP §2143.03.)

Claim 15 recites, *inter alia*,

A pressure treatment apparatus for processing a treatment object including a solid waste, comprising: . . .

means for feeding a treatment object including a solid waste into the pressure reactor, wherein the means for feeding the treatment object comprises a first solid reservoir and a second solid reservoir which is connected to the first solid reservoir through a first connecting pipe and connected to the pressure reactor through a second connecting pipe . . . .

To the extent claim 15 incorporates the subject matter of claim 27, Applicants address the Examiner’s rejection of claim 27 under § 103(a) as unpatentable over *McBrayer* in view of *Matovich*. The Examiner correctly acknowledges that *McBrayer* fails to disclose or suggest, at least, “wherein the means for feeding the treatment object

comprises a first solid reservoir and a second solid reservoir,” as recited in claim 15.

Applicants disagree, however, that *Matovich* compensates for this deficiency. (Paper No. 13, at 7.)

*Matovich* discloses a fluid-wall reactor, which includes a solid reactant feed system 238. (*Matovich*, col. 12, ll. 17–20; Figure 9, Title.) The solid reactant feed system 238 includes a supply bin 240 for holding the solid reactant. (*Matovich*, col. 12, lines 20–21; Figure 9.) The supply bin 240 feeds a crusher 241, which, in turn, feeds a sieve 242. (*Matovich*, col. 12, lines 20–22; Figure 9.) Coarse product output 245 of the sieve 242 is recycled to the crusher 241, whereas fine product output 243 is fed to a hopper 244. (*Matovich*, col. 12, lines 22–24; Figure 9.) Hopper 244 is secured to an elongated tubular housing 246. (*Matovich*, col. 12, lines 24–25; Figure 9.)

In the Office Action, the Examiner alleged:

*Matovich* (FIG. 8A, 8B, 9; column 11, line 63 to column 12, line 33) teaches a solid reactant feed system 238 for use in combination with a reactor (defined by inlet assembly 200/200a, electrode assembly 300, main assembly 400, and post-reaction treatment assembly 500; column 6, lines 12–17). The system comprises a first solid reservoir (supply bin 240), and a second reservoir (hopper 244) connected to the first solid reservoir 240 through a first connecting pipe (fine product output 243), and the second reservoir 244 connected to the reactor through a second connector (housing 246, outlet 250).

(Paper No. 13, at 7.) The Manual of Patent Examining Procedure specifically states,

“The USPTO must apply 35 U.S.C. 112, sixth paragraph in appropriate cases, and give claims their broadest reasonable interpretation, in light of and consistent with the written description of the invention in the application.” (MPEP § 2181.) But there is no

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indication that the Examiner examined claim 15 under the guidelines required for analysis in accordance with § 112, paragraph 6.

For example, it appears that the Examiner alleges that supply bin 240 and hopper 244 correspond to "a first solid reservoir" and "a second solid reservoir," respectively, as recited in claim 15. But the written description discusses an exemplary structure of "means for feeding a treatment object," which includes crushing means for feeding solid waste to the first solid reservoir. (Application, page 14, line 23 through page 15, line 11.) Yet *Matovich* at best discloses sending waste from crusher 241 eventually to hopper 244, which the Examiner alleges corresponds to the *second* reservoir. That is, in one embodiment the "means for feeding a treatment object" comprising "a first solid reservoir" recited in claim 15 corresponds to the crushing means discussed in the specification of the pending application including first solid reservoir 101. (Application, Figure 1.) At best, the Examiner could argue the solid reactant feed system 238 and hopper 244 of *Matovich* correspond to the "means for feeding a treatment object" and a "first solid reservoir," respectively, of claim 15. Even assuming, *arguendo*, the hopper 244 of *Matovich* corresponds to the first solid reservoir of the invention recited in claim 15, *Matovich* fails to disclose or suggest "a second solid reservoir, which is connected to the first solid reservoir through a first connecting pipe and connected to the pressure reactor through a second connecting pipe," as recited in claim 15.

Because *Matovich* fails to disclose or suggest structure in any embodiment that corresponds to the "means for feeding a treatment object" disclosed in the written description, Applicants submit claim 15 is allowable over *Matovich*. Both *McBrayer* and

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*Matovich* fail to disclose or suggest, "means for feeding a treatment object including a solid waste into the pressure reactor, wherein the means for feeding the treatment object comprises a first solid reservoir and a second solid reservoir which is connected to the first solid reservoir through a first connecting pipe and connected to the pressure reactor through a second connecting pipe," as recited in claim 15. Absent a disclosure or suggestion of each element of claim 15, the combination of the references cannot result in the claimed combination and cannot render the recited combination obvious.

In addition, Applicants dispute that there is any motivation to combine *McBrayer* and *Matovich*. For example, *Matovich* includes a reactor tube made of a porous fabric of a fibrous, refractory material, and installed in a tubular pressure vessel, which is distinctly different from the structure and function of the pressure treatment apparatus disclosed in *McBrayer*.

Further, to the extent the Examiner alleges any claim element is simply an "intended use," Applicants respectfully disagree. (Paper No. 13, at 5.) As discussed above, there are structural differences between claim 15 and *McBrayer*.

Thus, because *McBrayer* fails to disclose or suggest the combination of elements recited in claim 15, claim 15 should be allowed over *McBrayer*. Further, claims 16–21 should likewise be allowed at least because of their dependence from allowable claim 15. Withdrawal of the rejection of these claims is respectfully requested.

#### **Rejection of claim 26**

The Examiner rejected claim 26 under § 103(a) as unpatentable over *McBrayer* in view of *Suzuki*. Because *Suzuki* fails to compensate for the deficiencies of *McBrayer*, claim 26 should be allowed over the cited references.

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*Suzuki* discloses a high pressure reaction method. *Suzuki* fails to disclose or suggest, however, "means for feeding a treatment object including a solid waste into the pressure reactor, wherein the means for feeding comprises a first solid reservoir and a second solid reservoir which is connected to the first solid reservoir through a first connecting pipe and connected to the pressure reactor through a second connecting pipe," as recited in claim 15. Because *Suzuki* fails to compensate for the deficiency of *McBrayer* with respect to claim 15, from which claim 26 depends, the combination of *McBrayer* and *Suzuki* cannot render claim 26 obvious. Withdrawal of the rejection of this claim is respectfully requested.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 15–21 and 26 in condition for allowance. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that entering this Amendment would allow Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that entry of this Amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the references cited against the application. Applicants therefore request the entry of this Amendment, the

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Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
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Dated: *May 23, 2003*

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APPENDIX

15. (Twice Amended) A pressure treatment apparatus for processing a treatment object including a solid waste, comprising:

an exterior vessel:

a pressure reactor installed inside the exterior vessel;

[an exterior vessel in which the pressure reactor is installed through a gap, the exterior vessel being isolated from a treatment object and a reaction medium;]

means for feeding [the] a treatment object including [the] a solid waste into the pressure reactor, wherein the means for feeding the treatment object comprises a first solid reservoir and a second solid reservoir which is connected to the first solid reservoir through a first connecting pipe and connected to the pressure reactor through a second connecting pipe;

means for feeding [the] a reaction medium into the pressure reactor, and

means for controlling pressure within [the] a gap between the exterior vessel and the pressure reactor to be higher than that within the pressure reactor, wherein the exterior vessel is isolated from the treatment object and the reaction medium.

19. (Twice Amended) The pressure treatment apparatus as set forth in claim 15, wherein the pressure reactor is formed of at least one material selected from [the] a group consisting of austenite stainless steel, Ni, Zr, Ti, Ta, Au, Pt, and alloys thereof.

20. (Twice Amended) The pressure treatment apparatus as set forth in claim 15, wherein an inner surface of the pressure reactor is lined with at least one material selected from [the] a group consisting of austenite stainless steel, Ni, Zr, Ti, Ta, Au, Pt, and alloys thereof.

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